

Application No: 09/972,574

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Listing of Claims:

1. (Currently amended) A carriage servo control system for servo-controlling a movement of a carriage device in a direction transverse to a track formed on a recording medium, in which the carriage device has a detecting device mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said carriage servo control system comprising:

an input terminal for receiving a tracking equalizer signal indicative of a phase compensated error between a focus position of the optical beam and a target track position;

a pulse producing unit for producing a periodic signal that has a constant period;

an averaging unit for producing an averaged equalizer signal based on the tracking equalizer signal;

a multiplier for producing a drive signal for driving said carriage device based on at least a periodic sample of the averaged equalizer signal generated by the averaging unit and at least a periodic sample of the periodic signal generated by the pulse producing unit or based on the averaged equalizer signal generated by the averaging unit and at least a periodic sample of the periodic signal generated by the pulse producing unit; and

an output terminal for outputting the drive signal produced by the multiplier to control the movement of the carriage device.

11. (Currently amended) An information recording medium on which program for carriage servo control is recorded so that the program is readable by a computer incorporated in a carriage servo control system for servo-controlling movement of a carriage device in a vertical direction transverse to a track formed on a recording medium, in which the carriage device has a device mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said program causing the computer to:

generate a tracking equalizer signal that shows an error between a focus position of the optical beam and a target track position after phase compensation;

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generate a periodic signal that has a constant period;  
generate an averaged equalizer signal based on said tracking equalizer signal; and  
generate a drive signal for controlling said carriage device based on at least a periodic sample of the averaged equalizer signal and ~~at least a periodic sample of the periodic signal or based on the averaged equalizer signal and at least a periodic sample of the periodic signal.~~

19. (Currently amended) A method for controlling a movement of a carriage device in a direction transverse to a track formed on a recording medium, in which the carriage device has a detecting device mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said method comprising:

providing a tracking equalizer signal indicative of a phase compensated error between a focus position of the optical beam and a target track position;  
generating a periodic signal that has a constant period;  
generating an averaged equalizer signal based on said tracking equalizer signal; and  
generating a drive signal for controlling said carriage device based on at least a periodic sample of the averaged equalizer signal and ~~at least a periodic sample of the periodic signal or based on the averaged equalizer signal and at least a periodic sample of the periodic signal.~~

#### REMARKS

Applicants submit that, by amending Claims 1, 11 and 19 as shown above, claims cover the embodiments of Figures 2 and 4.

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**COMPANY:** United States Patent and Trademark Office

**FAX NUMBER:** (571) 273-7594

**FROM:** Robert Popa

**DATE:** October 12, 2005

**TOTAL NO. OF PAGES (INCLUDING THIS PAGE):** 4

**SUBJECT :** Proposed Claim Amendments  
 U.S. Application No. 09/972,574  
 Masato Sakamoto, et al.  
 "Optical Disk Player..."  
 Our Ref: B-4325/619126-5/RP/AK

**REMARKS:**

Dear Examiner Psitos:

Enclosed are proposed claim amendments for your review

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